

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**GULFSTREAM AEROSPACE
CORPORATION**

for an exemption from § 25.815 of Title 14,
Code of Federal Regulations

Regulatory Docket No. 29826

PARTIAL GRANT OF EXEMPTION

By letter dated October 21, 1999, Mr. Richard L. Johnson, Chief Engineer and Acting Manager Airworthiness & Certification, Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia 91402-2208, petitioned for an exemption from the requirements of § 25.815 of Title 14, Code of Federal Regulations (14 CFR 25.815). The proposed exemption, if granted, would permit movement of passenger seats into the required aisle space under certain circumstances on Gulfstream Model G-IV airplanes, airplane serial numbers 1348 through 1390.

Section of the Regulations Affected

14 CFR § 25.815 - Requires that minimum main aisle width in the passenger cabin be provided for all phases of airplane operation.

Petitioner's Supportive Information

The petitioner is the manufacturer of the Gulfstream Model G-IV model transport category jet airplane, which is designed, built, and certified to accommodate primarily business executives, Heads of State, diplomatic officials, and dignitaries in customized, extremely comfortable fashion. As certificated, the Gulfstream Model G-IV airplane is limited to a maximum of 19 passengers, but typical seating usually only accommodates 10 to 12 passengers.

ANM-00-028-E

The petitioner has five interior completion facilities, “Gulfstream Completion Centers,” which are located in Savannah, GA; Brunswick, GA; Dallas, TX; Long Beach, CA; and Appleton, WI. Four of these Completion Centers have their own independent design engineering capabilities and work through four different FAA Aircraft Certification Offices (ACO). At any given time, there are approximately 40 airplanes in various stages of completion in the five Completion Centers, and numerous interior completion supplemental type certificates (STC) are being used for that completion work. The petitioner states that, in the past, some FAA offices have permitted the use of placarding for taxi, takeoff, and landing (TTOL) seat positioning, and such approvals have shown no adverse service history.

Recently, the petitioner became aware of a variation in the interpretation of § 25.815 regarding aisle width requirements, to the extent that “minimum main aisle width in the passenger cabin be provided for all phases of airplane operation.” The petitioner considers that this interpretation, in essence, eliminates the use of individual seat location placards as a means of properly positioning the passenger seats for taxi, takeoff, and landing, as an acceptable means of assuring the required aisle width distances in compliance with § 25.815.

The petitioner states that the use of such seat TTOL positioning placards has been an historically acceptable compliance methods for several decades on business/executive airplane interiors, not only within the petitioner’s interior completion facilities, but also within the worldwide business/executive interior completion industry. This practice has been followed to facilitate the use of executive type seats that translate laterally and longitudinally, swivel, recline, and sometimes berth to accommodate the comfort and business activities of major executives, Heads of State, and diplomatic officials. This seat translation capability can encroach on the minimum aisle width requirements during flight, but seats will be properly positioned to the approve location for the more critical phases of operation such as taxi, takeoff, and landing.

The petitioner states that the workload brought on by incorporating the potential changes associated with the “new” interpretation of § 25.815 will be of significant economic impact on Gulfstream Aerospace Corporation. Such workload would include modifying all the in-work airplanes; revising previously approved and in-use engineering data and STC’s and obtaining FAA approval of same; returning previously purchased seats, approved in accordance with a Technical Standard Order (TSO), to vendors for rework or adjustment. This will adversely impact seat TSO approvals, and cause delivery schedule delays and slippages.

The petitioner expects the greatest adverse impact to be on customer satisfaction due to schedule delays, unsatisfactory seat utility or unacceptable seat restrictions, and potential airplane delivery rejections. The petitioner states that two of its customers already have declined to accept airplanes with seat tracking restrictions. Such customer dissatisfaction impacts not only economics, but completion integrity, and present and future business relations within the industry. Without the seat recline capability, the long-range utility of the airplanes is adversely impacted.

Petitioner's Requested Exemption

The petitioner requests, on behalf of itself and its Gulfstream Completion Centers, an exemption from that part of 14 CFR § 25.815 that requires the minimum aisle width to be maintained during all phases of flight. This exemption is requested for all Gulfstream Model G-IV airplanes in the Completion Centers that are scheduled for completion, but not yet delivered, through March 31, 2000, when completed with business/executive type interiors. The specific airplanes are those with airplane serial numbers 1348 through 1390 (43 airplanes).

The petitioner states that compliance with the minimum aisle widths for taxi, takeoff, and landing will still be maintained if the following restrictive provisions are observed:

- “1. The required aisle dimensions of § 25.815 will be designed to be maintained during taxi, takeoff, and landing.
- “2. Each seat and/or combination of seats moved from the TTOL position to encroach into the aisle width required by § 25.815 will be conspicuously placarded. These placards will clearly convey to the passengers how and when to return the seats to the approved positions for taxi, takeoff, and landing, or when instructed by the flightcrew in the event of an in-flight emergency or turbulence, as well as during taxi, takeoff, and landing. The placards may convey the information in pictorial form or in English.
- “3. The aforementioned seats will be equipped with a readily accessible briefing card which pictorially conveys to the passengers how to return the seats to the approved TTOL positions when instructed by the flight crew as above.
- “4. During the interior compliance inspection for each airplane, Gulfstream will demonstrate that the seat occupant is able to readily identify and comply with the proper TTOL positioning of the seats in accordance with the placards and briefing cards.
- “5. The airplane will not be operated in Commuter or Scheduled Air Carriage. (This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 91/subpart F, 125, or 135 On-Demand Executive Charter, as applicable.)
- “6. The passengers will receive an oral preflight and prelanding briefing from a trained crewmember instructing them on returning movable tables and seats to their approved TTOL positions in the event of an in-flight emergency or turbulence, and for taxi, takeoff, and landing, as shown on the applicable seat placards and briefing cards.
- “7. When the flightcrew determines that transiting the aisle is necessary either to address an emergency or to enable passengers to return to their seats during turbulence, they shall instruct passengers to return their seats to the approved TTOL position. This procedure must be incorporated into the normal and emergency procedures sections of the applicable Airplane Flight Manual (AFM).

“8. Operators will be encouraged to implement procedures to ensure that the seats are in an approved TTOL position prior to taxi and takeoff, prior to landing, and whenever the passengers are instructed to do so during the flight. This procedure would be incorporated into appropriate sections of the operator’s Operating Procedures Manual and training programs.”

Petitioner’s Justification for the Request

“Gulfstream Model G-IV airplanes are specifically designed to transport a small number of executive type passengers in a comfortable environment, usually catering to their specific desires or wishes. These cabins always include seats that rotate, translate in several directions, recline, and sometimes berth. Also offered are conference-type seating clusters for business or dining convenience that are served by the movable seats. Due to these features, the aisle widths are often encroached upon in flight for the convenience of the passengers and their business or pleasure, but that required aisle width is restored prior to landing and for the subsequent taxi after landing. This positioning is also required for pre-departure taxi and takeoff.

“The completion industry and the FAA have long been aware of this situation relating to business/executive airplane operations from the very earliest use of airplanes for this purpose, and have developed and used acceptable means of ensuring compliance for the most critical phases of airplane operations, i.e., taxi, takeoff, and landing. These alternate means of compliance usually have consisted of:

- TTOL seat-positioning placards for seats that can be rotated, shifted, or reclined, such as to cause an encroachment into the required aisle width.
- Passenger briefing cards, videos, ground training, or flight crew instructional briefings/announcements/reminders describing the proper TTOL positioning of the seats, and under what circumstances and/or phases of flight these positions are necessary.

“It is recognized that the placards or briefing guides can be easily disregarded, but considering the caliber and intelligence of the typical business/executive passenger, experience has shown that these passengers thoroughly understand the reasons for the positioning instructions, the need to comply, and the safety implications of non-compliance, and willingly accommodate the stowing requirements and requests. For in-flight emergencies, where a crew member may need to move quickly up or down the aisle, a typical executive cabin arrangement does not prove restrictive due to the small number of passengers involved, their usual cooperation, and the alternate pathways that can be take over or around seats, tables, and other furniture, making transiting through the passenger cabin uncomplicated. FAA should also bear in mind that airline operations allow the aisle (or aisles) to be blocked simultaneously by food cards during meal service periods, as well as having to contend with large numbers of passengers moving about the aisles at any given time.

“For the foregoing reasons and the alternate means of compliance taken, Gulfstream believes that the present methods of TTOL seat positioning placards and instructions, in the reduced passenger operating environment, when coupled with the additional requirements outlined [above], provide a level of safety equivalent to that required by the recent interpretation of § 25.815.”

Petitioner’s Reasoning Why Exemption Would Be in the Public Interest

The petitioner provides the following explanation of why granting the requested exemption would be in the public interest:

“The granting of this petition for exemption is in the public interest as it will permit the efficient and safe transportation of business executives, Heads of State, diplomatic officials, and other dignitaries in the continued comfortable and accommodating cabin environment for which they find this type of airplane desirable and useful. Without this relief, the cabin comforts associated with translating, rotating and reclining seats will not be available, and the ultra-long-range aspects of passenger carriage in the Model G-IV airplane will be adversely affected. Gulfstream believes that the compromises proposed in this request for exemption will meet both the safety compliance aspects of § 25.815 and the design requirements of the customers that buy and operate these airplanes.

“Continued ability to deliver these desirable features in this U.S.-manufactured product will assure that Gulfstream does not lose business to less-rigorously restricted foreign competitors, thus serving to keep the regional and U.S. economic situations in tact. Gulfstream is one of the world’s leading designers and installers of transport category executive interiors, providing employment to approximately 7,000 people, in addition to numerous suppliers and subcontractors. It is Gulfstream’s goal to retain and improve this position in the completion business, and this exemption will facilitate that goal.

“Gulfstream believes that in order to maintain our stature in the worldwide executive interior completion business, this exemption is needed for the time period and airplanes requested. This exemption will provide a suitable alternate seat installation until seat/installation redesigns and STC revisions can be engineered to show suitable compliance to the current interpretation of § 25.815.

“Gulfstream further believes it to be the public interest that this exemption be extended to include 14 CFR 135 on-demand commercial operations in the executive/business cabin configuration. This would accommodate time-shared, fractional ownership, or owner-lease operations currently operating or anticipating operating Gulfstream Model G-IV airplanes in on-demand charter operations under part 135. This will further support the U.S. economic system by allowing these additional business facets with the Gulfstream product line.

FAA's Determination as to Need for Public Process

The petitioner requests that the public process be waived, as follows:

“Because of the timing of this rule’s compliance acceptability, changes relative to affected airplanes have already made some deliveries tardy to customer acceptance schedules, and since a new precedent will not be set by this exemption, we request expedited handling of this request and that the public comment period requirements of 14 CFR part 11.27 be waived.”

The FAA has considered this request and, in accordance with 14 CFR 11.27(j)(3), the FAA finds that action on this petition need not be delayed by Federal Register publication and comment procedures for the following reasons:

1. The notice and opportunity for prior public comment are impracticable because those procedures would significantly delay issuance of the approval design and the delivery of the affected aircraft; and
2. Issuance of the exemption would not set a precedent. It has been determined that for some time the FAA has approved transport category airplanes operated in private use that do not comply with the requirements of § 25.815.

FAA's Analysis and Summary

During a Cabin Safety Workshop sponsored by the FAA’s Transport Airplane Directorate on August 25 through 28, 1998, it became clear that there has been a non-standardized approach to compliance with § 25.815:

- Some FAA offices permit seat backs to recline or break over into the required aisle in private use (business/executive) airplanes.
- Some FAA offices accept seats that translate, pivot, or track to positions that intrude into the aisle.
- Some FAA offices have found as acceptable those interior arrangements that have the entire aisle blocked when seats are not in the taxi, takeoff, and landing position.
- Some FAA offices require that the seats that recline or break over into the aisle have placarding on the seats requiring the seat backs to be in the upright position for taxi, takeoff, and landing. The placarding is in lieu of positive design features that prevent such movement. The seats that translate, pivot, or track into positions that encroach into the minimum required aisle width are placarded to be in a specific position for taxi, takeoff, and landing that provides the required aisle width. Encroachment into the aisle during flight is allowed for private use airplanes, and the aisle width requirements of § 25.815 are only applied to the taxi, takeoff, and landing position of the seats.

These various findings of compliance are contrary to the requirements of § 25.815. The regulation for width of aisle does not specify that the requirement applies only to taxi, takeoff, and landing positions of seats. Therefore, the specified aisle width is required to be maintained during all phases of airplane operation.

Aisles are required to allow for rapid egress from the airplane in an emergency. They also provide the means for crewmembers to access all parts of the cabin during airplane operations to address emergency conditions. Additionally, they allow passengers to return to their seats during turbulence. Not providing adequate aisles during flight may prevent the accomplishment of these needs.

Section 25.815 requires minimum aisle widths and, in the absence of exceptions in the rule, applies to all phases of flight, including taxi, takeoff, and landing. At the time the policy was developed for this rule, this requirement was intended to apply to all phases of flight.

This position notwithstanding, it has been determined that for some time the FAA has approved transport category airplanes operated in private use that do not comply with the requirements of § 25.815. These approvals have been in the form of supplemental type certificates (STC) and field approvals. Based on these FAA approvals, the companies installing interiors in private use airplanes have continued to offer and sell more configurations that do not comply with the requirements of § 25.815.

The FAA is giving great attention to the issue of transport category airplanes operated in private use. There are several regulatory requirements, including those relating to aisle width, for which it may be in the public interest to develop new criteria that take into account the differences between private use and air carrier operations. The FAA intends to summarize its views on these regulations and, ultimately, propose revisions to the requirements, where appropriate. Section 25.815, the subject of this petition for exemption, may be included in those proposed revisions. If revised aisle width regulations are adopted, this may allow additional design flexibility when certain conditions are met. This general issue is not resolved at this time, however, and the particular airplane in question must be addressed on its own merits.

In summarizing the petitioner's request for exemption, the FAA acknowledges the following:

- The petitioner identifies that 43 Gulfstream Model G-IV airplanes (serial numbers 1348 through 1390), which will be delivered through March 31, 2000, will have an executive interior arrangement installed and will be affected by this petition for exemption. The Gulfstream Model G-IV is certified for a maximum of 19 passenger and typical seating usually accommodates only 10 to 12 passengers.
- The petitioner identifies that aisle requirements of § 25.815 will be maintained during taxi, takeoff, and landing. Also, each seat and/or combination of seats that can be moved from the TTOL position that encroaches into the required aisle space will be conspicuously placarded and will be equipped with a readily-accessible briefing card that identifies the positions approved for taxi, takeoff and landing.

- The petitioner proposes that a trained crew member will provide oral preflight and prelanding briefings to the passengers, which will include information as to when to return the seats to the approved TTOL positions. The petitioner also proposes that the operator of the airplane will implement a procedure to ensure that the seats are in their approved TTOL position prior to taxi, takeoff, and landing.
- The petitioner proposes that the airplane will not be operated in Commuter or Scheduled Air Carriage, and that this provision would not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 91/subpart F, 125, or 135 On-Demand Executive Charter, as applicable.
- The petitioner identifies detrimental reliance on previous FAA approvals in requesting exemption from the intent of § 25.815, stating the proposed placarding and briefings provide an acceptable method of compliance for this type of airplane operation.

FAA's Conclusions and Partial Grant of Exemption

In consideration of the foregoing, I find that a partial grant of a time-limited exemption until October 1, 2004, is in the public interest and will not adversely affect the level of safety provided by the regulations. It is anticipated that, by that date, any regulatory revisions described previously will have been adopted, and will address future operations of the subject airplanes.

Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701, delegated to me by the Administrator (14 CFR § 11.53), the petition for exemption from the requirements of § 25.815, to allow a movement of passenger seats into the required aisle space under certain circumstances on Gulfstream Model G-IV airplanes, serial numbers 1348 through 1390, is hereby granted until October 1, 2004, with the following provisions:

1. The required aisle dimensions of § 25.815 must be maintained during taxi, takeoff, and landing.
2. Each seat and combination of seats moved from the taxi, takeoff, and landing position that encroaches into the aisle space required by § 25.815 must be conspicuously placarded. The placards must clearly convey to the passengers how and when to return the seats to positions approved for taxi, takeoff, and landing, when instructed by the flightcrew in the event of an in-flight emergency or turbulence, as well as during taxi, takeoff, and landing. The placards may convey the information in pictorial form or in English.
3. Each seat and combination of seats moved from the taxi, takeoff, and landing position that encroaches into the aisle space required by § 25.815 must be equipped with a readily accessible briefing card. The cards must pictorially convey to the passengers how to return the seats to positions approved for taxi, takeoff, and landing, when instructed by the flightcrew in the event of an in-flight emergency or turbulence, as well as during taxi, takeoff, and landing.

4. The applicant must demonstrate that the seat occupant is able to readily identify and comply with the proper taxi, takeoff, and landing position for the seat.
5. The airplane must not be operated for hire, or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable. However, it does preclude use of the airplane in On-Demand Executive Charter operation under part 135; that type of operation is for hire and the passenger on the airplane may not be familiar with the interior arrangement of the airplane. The following text must be incorporated into the supplemental type certificate (STC):

“The interior configuration approved by this STC utilizes Exemption No. 7054, which prohibits the airplane from being operated for hire, or offered for common carriage.”

6. The airplane is operated with oral preflight and prelanding briefings of the passengers by a trained crewmember instructing them to return the movable tables and seats to their approved taxi, takeoff, and landing positions in the event of an in-flight emergency or turbulence as well as during taxi, takeoff, and landing, as identified by the placards and briefing cards. This procedure must be incorporated into the normal procedures section of the Airplane Flight Manual (AFM).
7. When the flightcrew determines that transiting the aisle is necessary either to address an emergency or to enable passengers to return to their seats during turbulence, they shall instruct passengers to return their seats to the approved taxi, takeoff, and landing positions. This procedure must be incorporated into the normal and emergency procedures sections of the Airplane Flight Manual (AFM).
8. The operator must implement a procedure to ensure that the seats are in their approved taxi, takeoff, and landing positions prior to taxi and takeoff, prior to landing, and whenever the passengers are instructed to do so during the flight. This procedure must be incorporated into the normal and emergency procedures sections of the Airplane Flight Manual (AFM).

This partial grant of exemption expires on October 1, 2004.

Issued in Renton, Washington, on October 26, 1999.

/s/

Vi L. Lipski, Acting Manager
Transport Airplane Directorate
Aircraft Certification Service